

Compact, Dual Channel, Mid-IR Laser Spectrometer, Phase I

Completed Technology Project (2007 - 2007)



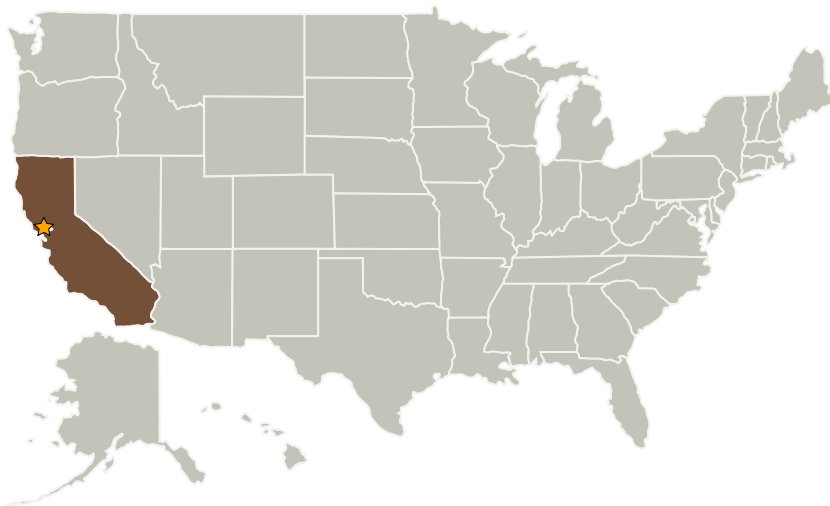
Project Introduction

The Small Business Innovative Research Phase I proposal seeks to develop a dual channel, compact mid-infrared laser spectrometer for planetary atmosphere exploration. The device will be capable of measuring trace gases at 3.3 and 4.6 μm without the need for cryogenics. By using novel, fiber-coupled, solid state lasers, performance will be improved over traditional tunable diode laser sensors.

Anticipated Benefits

Potential NASA Commercial Applications: The worldwide market for gas sensors with the capabilities of the proposed system is quite large. Numerous potential applications can be found in trace gas monitoring, pollution monitoring, industrial process control, and medical diagnostics.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Ames Research Center(ARC)	Lead Organization	NASA Center	Moffett Field, California
Novawave Technologies	Supporting Organization	Industry	Redwood City, California



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Ames Research Center (ARC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Primary U.S. Work Locations

California

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Hansjurg Jost

Technology Areas

Primary:

- TX08 Sensors and Instruments
 - └ TX08.3 In-Situ Instruments and Sensors
 - └ TX08.3.2 Atomic and Molecular Species Assessment